- A vector containing DNA that encodes the Ribonuclease of SEQ ID NO:1.
- 2. The vector of claim 1, wherein the vector is pET11d plasmid.
- 3. The vector of claim 1, wherein the vector is pET22b plasmid.
- 4. A vector containing DNA that encodes the Ribonuclease of SEQ ID NO:17.
- 5. A vector containing DNA that encodes the Ribonuclease of SEQ ID NO:34.
- 6. A vector containing DNA that encodes the Ribonuclease of SEQ ID NO: 51.
- 7. A vector containing DNA that encodes the Ribonuclease of SEQ ID NO: 55.
- 8. A protein having the amino acid sequence of SEQ ID NO:59 produced recombinantly.
- 9. A protein produced recombinantly and having the amino acid sequence of SEQ ID NO:1 after its initial methionine residue has been cleaved off.
- 10. A protein having the amino acid sequence of SEQ ID NO:60 produced recombinantly.
- 11. A protein produced recombinantly and having the amino acid sequence of SEQ ID NO:17 after its initial methionine residue has been cleaved off.

- 12. A protein having the amino acid sequence of SEQ ID NO:61 produced recombinantly.
- 13. A protein produced recombinantly and having the amino acid sequence of SEQ ID NO:34 after its initial methionine residue has been cleaved off.
- 14. A protein having the amino acid sequence of SEQ ID NO:68 produced recombinantly.
- 15. A protein produced recombinantly and having the amino acid sequence of SEQ ID NO:51 after its initial methionine residue has been cleaved off.
- 16. A protein having the amino acid sequence of SEQ ID NO:59.
- 17. A conservatively modified variant of the protein of claim 16.
- 18. A gene that when expressed in a host encodes the protein of claim 16.
- 19. A gene that when expressed in a host encodes the protein of claim 17.
- 20. A protein having the amino acid sequence of SEQ ID NO:60.
- 21. A conservatively modified variant of the protein of claim 20.

- 22. A gene that when expressed in a host encodes the protein of claim 20.
- 23. A gene that when expressed in a host encodes the protein of claim 21.
- 24. A protein having the amino acid sequence of SEQ ID NO:61.
- 25. A conservatively modified variant of the protein of claim 24.
- 26. A gene that when expressed in a host encodes the protein of claim 24.
- 27. A gene that when expressed in a host encodes the protein of claim 25.
- 28. A protein having the amino acid sequence of SEQ ID NO:63.
- 29. A protein having the amino acid sequence of SEQ ID NO:65.
- 30. A protein having the amino acid sequence of SEQ ID NO:67.
- 31. A protein having the amino acid sequence of SEQ ID NO:1 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:64 in order.
- 32. A protein having the amino acid sequence of SEQ ID NO:1 preceded at its N-terminal end by a leader

sequence that has at least the first and at most all of the residues of SEQ ID NO:66 in order.

- 33. A protein having the amino acid sequence of SEQ ID NO:68.
- 34. A conservatively modified variant of the protein of claim 33.
- 35. A gene that when expressed in a host encodes the protein of claim 33.
- 36. A gene that when expressed in a host encodes the protein of claim 34.
- 37. A protein having the amino acid sequence of SEQ ID NO:69.
- 38. A conservatively modified variant of the protein of claim 37.
- 39. A gene that when expressed in a host encodes the protein of claim 37.
- 40. A gene that when expressed in a host encodes the protein of claim 38.
- 41. A conjugate protein comprising the protein of claim 37 and a targeting moiety conjugated to the cysteine residue at position 71.
- 42. A protein having the amino acid sequence of SEQ ID NO:17 preceded at its N-terminal end by a leader

sequence that has at least the first and at most all of the residues of SEQ ID NO:64 in order.

- 43. A protein having the amino acid sequence of SEQ ID NO:17 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:66 in order.
- 44. A protein having the amino acid sequence of SEQ ID NO:34 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:64 in order.
- 45. A protein having the amino acid sequence of SEQ ID NO:34 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:66 in order.
- 46. A protein having the amino acid sequence of SEQ ID NO:51 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:64 in order.
- 47. A protein having the amino acid sequence of SEQ ID NO:51 preceded at its N-terminal end by a leader sequence that has at least the first and at most all of the residues of SEQ ID NO:66 in order.
- 48. A protein having the amino acid sequence of SEQ ID NO:55.
- 49. A fusion protein having the amino acid sequence of SEQ ID NO:70.

- 50. A conservatively modified variant of the protein of claim 49.
- 51. A gene that when expressed in a host encodes the protein of claim 49.
- 52. A gene that when expressed in a host encodes the protein of claim 50.
- 53. A fusion protein comprising a) the protein of SEQ ID NO:1 or a conservatively modified variant thereof and b) a targeting moiety.
- The fusion protein of claim 53, further comprising a 54. linker sequence linking the protein and the targeting moiety.
- 55. A conjugated fusion protein comprising a) the fusion protein of SEQ ID NO:70 or a conservatively modified variant thereof and b) a targeting moiety conjugated to the cysteine residue located at position 71.
- 56. A vector containing DNA of SEQ ID NO:71 encoding the Ribonuclease of SEO ID NO:70.

Date: July 17, 2003 Shailendra K. Saxena, Ph.D.